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ABSTRACT

The School Attendance Demonstration Project (SADP) was designed to improve school attendance among teenagers receiving Aid to Families with Dependent Children (AFDC) benefits in San Diego County, California. An impact study was conducted from March 10, 1996 to March 10, 1998, to evaluate the effects of providing social services and imposing financial penalties to improve school attendance. The evaluation also included a process study and a cost benefit study. An experimental and longitudinal research design was administered to evaluate this demonstration project for education and welfare policy reforms. The impact study shows how problems with research design, such as accretion, can be overcome and reveal robust program effects. The results indicate that study group assignment was a positive and significant predictor of school attendance. A program effect is inferred. The treatment group was more likely to meet the 80% attendance requirement than the control group. Results show that meeting the 80% attendance requirement was predicted by study group, ethnicity (Hispanic), number of caretakers, Children's Service Bureau status, Juvenile Probation status, and educational program. Students with two caretakers in the household were more likely to attend school than students with one caretaker in the household. It is possible that workfare programs designed to employ parents may reduce AFDC student attendance. There was no evidence that graduation or dropout rates were affected by the program. (Contains 10 tables.) (Author/SLD)

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The School Attendance Demonstration Project:

Impact analysis using an experimental and longitudinal research design

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ABSTRACT

The School Attendance Demonstration Project (SADP) was designed to improve school attendance among teenagers receiving AFDC benefits in San Diego County. An impact study was conducted, from March 10, 1996 to March 10, 1998, to evaluate the effects of providing social services and imposing financial penalties to improve school attendance. The evaluation also included a process study and a cost benefit study. An experimental and longitudinal research design was administered to evaluate this demonstration project for education and welfare policy reforms. The impact study shows how problems with research design, such as accretion, can be overcome and reveal robust program effects.

The results indicate that study group assignment was a positive and significant predictor of school attendance. A program effect is inferred. The treatment group was more likely to meet the 80% attendance requirement than the control group. The results show that meeting the 80% school attendance requirement was predicted by study group, ethnicity (Hispanic), number of caretakers, Children's Service Bureau status, Juvenile Probation status, and education program. Students with two caretakers in the household were more likely to attend school than students with one caretaker in the household. So programs (workfare) designed to employ parents may reduce AFDC student attendance. This is an unexpected possibility that may have serious ramifications for public policies. We found no evidence that graduation and dropout rates were affected by the program.

This paper should interest evaluators in quantitative methods and research design and implementors of human services, especially in education and social work. The paper topics: education reform, welfare reform, research design, and quantitative methodology, encompass several policy fields and should stimulate rich discussion about evaluation.

The School Attendance Demonstration Project

The School Attendance Demonstration Project (SADP) was implemented by San Diego County Department of Social Services (DSS) to improve school attendance among Aid for Dependent Children (AFDC) recipients with a service program and financial penalty. The SADP required 16-18 year old AFDC students to meet an 80% minimum attendance requirement at school each month or incur a financial penalty—the loss of AFDC benefits.

Student in the experimental group were notified in September 1995 and December 1995, about meeting the attendance rule. In January 1996, DSS began tracking students' attendance at school, which continued through March 1998. In March 1996, DSS began sending students who did not meet the rule to orientation, where they were screened for unmet social service needs and given warnings about the financial penalty they may incur. AFDC benefits were to be cut off after two months of noncompliance with the program.

The Impact Study

This impact study was designed to evaluate the joint effects of providing social services and imposing financial penalties to improve school attendance by AFDC beneficiaries in San Diego County. This study analyzes the period, from March 10, 1996 to March 10, 1998. The summer months, during which students didn't attend school, were excluded. During the evaluation, monthly data matches between County school district records and AFDC records were conducted by the San Diego County Department of Social Services (DSS). What follows is a secondary analysis. The final database contains 22,749 records.

A coding scheme was developed to extract student records for San Diego Unified School District (SDUSD). SDUSD represents a 12.22% sample (n = 2,780) of students among San Diego County districts (N = 22,749) selected for administrative convenience. Both the Sweetwater Union High School District (SUHSD) and Grossmont Union High School District (GUHSD) joined the study a year after SDUSD, but were not included in analyses due to incomplete information on participants. The time series has 19 monthly observations when complete student records are available. The following data selection procedures were used to extract matched records for SDUSD into a monthly time series.[1]

The selection criteria are: (1) the student was active on AFDC on the match date and during the prior month, (2) the student was not enrolled in the Cal-Learn program, (3) the student was enrolled in an eligible school on the match date during the prior month, and (4) the student was enrolled in an eligible school that is part of the baseline cohort. Participant data were validated by matching AFDC client files with student records from SDUSD. The models that were estimated for this report used either (1) an exact match on school records or (2) a partial match on the first four characters of the students' last name. All participants in the study were randomly assigned to the treatment group (2/3) and the control group (1/3) by the DSS before the evaluation began in March 1996. The baseline period for SDUSD is February 1996. The follow-up data extends through March 1998.

There were missing data among the population of student participants in SDUSD, which consisted of values assigned to variables of unknown quality. The grand mean for the treatment group is 9.4% of the sample, while the grand mean for the control group is 15.5% of the sample. The study groups are different due to accretion, which is a program

artifact of checking school attendance records. Accretion, which is the inverse of attrition, does not threaten the internal validity of the evaluation. Mohr (1995:73) discusses history, selection, and contamination as threats to internal validity for impact designs. The history threats include external events, testing, maturation, regression, and attrition. Mohr notes, "in the experimental designs, we need not be concerned about attrition itself; the existence of a comparison group shifts concern to the problem of divergent attrition." The primary source of missing data came from DSS data matching procedures. A secondary source of missing data came from the incomplete reporting of program activities by SADP staff, but this activity was not systematic. The primary source concerned our ability to make causal inferences about program effects, because the proportion of missing data was larger than the estimated program impact. The problems were thoroughly investigated. The bias that results in an accretion of observations in the treatment group is mitigated by the design.[2]

Variables

Dependent variables are the measured observations to be predicted; while the independent variables are the measured observations used to predict. The dependent variables include:

(1) Attendance (percent; meets rule coded 1, otherwise coded 0)
(2) Dropout status (yes coded 1, no coded 0)
(3) Graduation status (yes coded 1, no coded 0)

There is incomplete information on graduation rates. Therefore, a proxy measure of graduation status measures the number of students attending school in the month they would be eligible for graduation, but this proxy can't validate that they earned a diploma.

The independent variables include:

(1) Study group (treatment group coded 1, control group coded 0)
(2) Gender (male coded 0, female coded 1)
(3) Race/ ethnicity of the student (Hispanic coded 1, other coded 0)
(4) Age (years)
(5) Number of caretakers in household
(6) Number of people in household
(7) Children's Services Bureau involvement (yes coded 1, no coded 0)
(8) Juvenile Probation involvement (yes coded 1, no coded 0)
(9) Education program (alternative coded 1, comprehensive coded 0)

Demographic Characteristics

The demographic characteristics of participants include gender, race, ethnicity, age, and deprivation codes. The gender of students is evenly split between males and females for the treatment group and control group. An independent samples t-test was estimated on average gender by study group to verify that random assignment of participants occurred at baseline. As expected, no difference was found between the study groups for gender.

The race and ethnicity of students is reported by study group (Table 1, Appendix). Hispanic students showed the lowest school attendance, while Asian and Pacific Islander students showed the highest school attendance. Black and white (not of Hispanic origin) students fall somewhere between these extremes. In statistical models below, we analyze SADP school attendance patterns with ethnicity (Hispanic origin) as a predictor variable.

The average age of students is 17.09 (sd=0.69) for the treatment group and 17.01 (sd=0.68) for the control group. Average age of students is stable between study groups. The student deprivation codes measure risk factors for participants (Table 2, Appendix).

These codes are (1) absence of parent, (2) death of parent, (3) incapacitated parent, (5) parent on Social Security--No AFDC, and (6) unemployed parent. The data were stable between study groups. Participants' family structure can be identified by the deprivation codes. Hence, absence of parent and death of parent reveal a one-parent family, while an incapacitated parent, parent on Social Security--No AFDC, and unemployed parent reveal a two-parent family. This yields a measure for the number of "parents" in the household.

Program Codes

Program codes are used to track school attendance and the students' connection with the SADP. The codes are whether or not the student (1) attended okay ($\geq$80%), (2) did not attend okay (<80%), (3) gave a good reason for non-attendance, (4) showed a form to be excused, (5) when the school record was not found, and (6) attended orientation. Other codes are (7) registered, (8) sanctioned, (9) discontinued enrollment, (10) discontinued orientation, (11) no action taken, (12) enrolled in Cal-Learn, and (13) referred to SADP.

A small percentage (grand mean = 1.9%) of treatment group students attended an orientation each month for school attendance problems, while a larger percentage (grand mean = 6.6%) of students were discontinued in orientation. Many students showed good reason (grand mean = 6.2%) or a form that a mistake was made (grand mean = 1.3%) on their attendance records. Few sanctions--resulting in financial penalties were recorded, as discussed in the cost benefit study (Jones et al. 1999). In our future analyses, a dynamic model may be constructed to examine the entry rates and exit rates of SADP participants.

School Attendance

An important purpose of the SADP is to improve school attendance. School attendance was measured as (1) mean percentage (i.e., seat) time in school and (2) meeting the 80% attendance rule. A related research question is:

What are the attendance patterns of 16 to 18 year old AFDC teens in the SADP?

The treatment group had higher average attendance (grand mean = 86.06%) than the control group (grand mean = 84.99%). The evidence supports SADP program goals. Further, the treatment group met the 80% attendance rule (grand mean = 82.05%) more often than the control group (grand mean = 75.57%). This also shows a program effect.

Impact Models

Statistical models were estimated to calculate the program's impact on school attendance. It was hypothesized that:

AFDC Teens with prior school attendance problems will increase their days in school attendance, relative to the control group, after receiving SADP services.

Linear models were used for the dependent variable--percentage school attendance, while logistic models were used for the dichotomous variable--meeting the 80% attendance rule.

Bivariate Linear Regression Models

Statistical models were estimated to predict differences in percentage of attendance by the treatment group and the control group. Table 3 (Appendix) shows estimation results by period, constant, impact, t-value, and p-value (significance). The constant is the percent of school attendance for the control group. The impact (B) is the estimate of "increased" attendance predicted for the treatment group. As expected, the impact is usually positive. However, many estimates are not significant and the magnitude of the coefficients is not large. A better estimate of program impact is given by meeting the 80% attendance rule.

Bivariate Logistic Regression Models

Logistic regression was used to estimate statistical models that predict the probability of the treatment group meeting the 80% attendance rule. No estimate of the autocorrelated error in the dependent variable was required. The algorithm excludes missing data. The results reveal that the treatment group meets the 80% attendance rule, while the control group does not. The logits (B) are not shown for brevity, but were all positive and often significant ($p \leq 0.05$). The probability that the treatment group meets the 80% attendance rule is shown in Table 4 (Appendix). Valid probabilities range between 0 and 1 inclusive. The highest probability of meeting the 80% attendance rule is 1 and the lowest probability of meeting the 80% attendance rule is 0. The estimated impact is the difference between the probability that the treatment group meets the 80% rule minus the probability that the control group meets the 80% rule. The mean (~0.67) probabilities are near 0.8, because the logistic model estimates became biased by the 2:1 ratio of study group assignments.

The impact (d) is lowest in February 1996, the baseline month before treatment, and highest in May 1996. In February 1996, d=0.02, which means that the probability of the treatment group meeting the 80% rule was 2% higher than the control group. A year later (in February 1997), d=0.08, which means that the probability of the treatment group meeting the 80% rule was 8% higher than the control group. This is a 6% increase over February 1996. The probabilities show a pattern of impact (d) supporting the program.

Multivariate Logistic Regression Models

Like bivariate models, the multivariate models show the treatment group is a statistically significant predictor of meeting the 80% attendance rule. The logit signs B are positive and significant for study group predicting meeting the 80% rule for the monthly periods, except for the baseline (February 1996) as was expected. A related research question is:

> *Is there a differential affect on subgroups of teens (e.g. age, grade, teenage parents, number of children in the assistant unit, children with compounded social, behavioral, and familial problems)?*

There are alternative educational programs for students in the San Diego Unified School District that might affect meeting the 80% attendance rule. The type of school is defined as either comprehensive or alternative. The latter category includes Charter schools with a small percentage of students in the sample (grand mean = 1.03%). Alternative schools serve students who have trouble with attending the "mainstream" comprehensive schools.

Multivariate models estimate the probability that (1) study group predicts "meets the 80% attendance rule," controlling for (2) gender, (3) ethnicity,[3] (4) age, (5) number of

parents, (6) household size, (7) Children's Service Bureau status, (8) Juvenile Probation status, and (9) educational program. The results are shown by time period (Tables 5-9, Appendix). In future analyses, a pooled time series model may be estimated to compare with the monthly models. The signs on gender are always negative, but the logits are not always significant. Nevertheless, females are less likely to meet the 80% rule than males. The signs on ethnicity are always negative and usually significant. Thus, Hispanics were less likely to meet the 80% rule than other race/ethnic subgroups. The signs on age were usually negative, but were not always significant. Younger students may be less likely to meet the 80% rule than may older students. The number of parents in the household sign is always positive and significant. Students having two caretakers in the household were more likely to meet the 80% rule than students with one caretaker. Thus, programs such as workfare that are designed to employ parents might reduce AFDC student attendance. Household size is unrelated to students meeting the 80% school attendance rule. Finally, the signs for Children's Service Bureau status, Juvenile Probation status, and school type (education program) are always negative and usually significant. This is not surprising to the extent that presenting problems are associated with students' ability to attend school.

Students "self-select" into alternative schools after presenting problems. What is interesting from a programmatic viewpoint is the much larger magnitude school type has on meeting the 80% attendance rule than does a study group assignment. The partial R shows that school type is many times more influential over attendance than study group. To the extent that school type (education program) represents unmet social problems that may need prevention and intervention, the program needs strengthening to address them.

Dropouts

Dropout status is defined as non-attendance in a subsequent month following recorded attendance. Thus, non-attendance indicates that the student has dropped out of school. The dropout rate is a measure of attrition. The dropout rate was calculated as follows. First, every student in the monthly sample was initially classified as a dropout (coded 1). Next, those students who attended school in the current month (t) and in the subsequent month (t+1) were reclassified as not being a dropout (coded 0) in the subsequent month (t+1). The dropout rates for the subsequent month (t+1) are calculated by looking ahead from the current month (t) to determine how many students drop out of school later. This method of calculating the dropout rate corrects for new students entering the sample.

To calculate the dropout rate, baseline months are needed. There are no dropout figures for February and March 1996, September and October 1996, and September and October 1997, because these are baseline months. For example, student data are matched on March 10, 1996. The selection criteria require students to attend school in February and March to be included. The March sample was used to calculate dropouts for April 1996. The lag structure requires three months of attendance data to do the calculation.

The treatment group (grand mean = 6.70%) had fewer dropouts than the control group (grand mean =7.12%). Since the treatment group is twice as large as the control group, we should expect twice as many dropouts in the treatment group, ceteris parabis. Instead, we have evidence of a positive retention effect for the program. To determine whether and to what extent there are differences between the study groups on dropout

rates, an independent samples student's t-test was conducted on the monthly means for each study group over time. No significant difference on mean dropout rates was found.

Graduation

The data contains a variable (dichotomous dependent) coded 1 for graduation certificate found and 0 for graduation certificate not found. These data are available for June 1998. It was hypothesized that:

> *The secondary school graduation rates will increase for AFDC recipients relative to the control group after receiving SADP services.*

Two variables were coded for the month and year of graduation. Records for June 1998 were chosen, reducing the sample from n=2,780 to n=704. Age appropriateness of grade level was considered in estimating the graduation rate. The school district uses December 1st birthdays as the cutoff date for age in assigning a student to a grade level. This implies that students should be more than 17 years old on March 10, 1998, when these data were matched. There were 16-year-olds (n=36) in the sample, so they were removed. The 17 year olds (3.33/12 = 0.2775) who were underage (n=41) by the December 1st cutoff date were also removed further reducing the sample (n=627). Study group was regressed on graduation. The logits indicate no statistical difference between groups for graduation.

To determine what might explain graduation, a multivariate model was estimated to predict graduation by (1) study group, (2) gender, (3) ethnicity, (4) age, (5) number of parents, (6) household size, (7) Children's Service Bureau status, (8) Juvenile Probation

status, and (9) educational program. The results (Table 10, Appendix) show that males were more likely to graduate than females. Hispanics were less likely to graduate than other race/ethnic groups. Age predicts graduation, but this could be an artifact of "grade appropriateness." Number of parents and household size have reverse signs. This means that the students with two parents were more likely to graduate high school than students with one parent, while students from larger sized households were less likely to graduate than students from smaller sized households. This confirmed our intuition on resources.

Having two parents should mean more support for students. Coming from a larger sized household should mean less support for students. Students in single parent families and in larger sized households probably work either inside or outside of the home, which can negatively affect school attendance and graduation rates. Children's Service Bureau status and Juvenile Probation status were unrelated to graduation. Educational program predicted graduation. As expected, students attending alternative schools were less likely to graduate from high school than students attending mainstream comprehensive schools.

Conclusions

The results show that study group assignment was a positive and significant predictor of school attendance. This means there is a program effect. The treatment group was more likely to meet the attendance requirement than the control group. A research question is:

> *Can explanations for attendance, absences, completion rates, and dropout rates be identified?*

The models show that meeting the 80% school attendance requirement was predicted by study group, ethnicity (Hispanic), number of parents, Children's Service Bureau status, Juvenile Probation status, and educational program. Gender and age were not consistent predictors of school attendance and household size is unrelated meeting the requirement.

No difference was found between the study groups on graduation, but subgroup predictors were found for graduation. Gender predicted graduation. Males were found more likely to graduate than females. Age predicted graduation, as should be expected. Older students were more likely to graduate than younger students. Ethnicity predicted graduation. Hispanic students are less likely to graduate than other race/ethnic students. The number of parents in the household is a positive predictor, while household size is a negative predictor of high school graduation. School type predicted graduation. Students enrolled at comprehensive schools were more likely to graduate than students enrolled at the alternative schools. No difference between the study groups was found for dropouts.

Future studies should be carefully planned to insure integrity of the database. This means better data matching procedures and improved data collection from school districts. Furthermore, implementers should adhere to their sanction criterion by imposing financial penalties when and where appropriate to properly test the program. The financial penalty was not implemented, which might give policy makers pause before replicating the SADP in other jurisdictions--without similar social services. Finally, AFDC students were more likely to meet the 80% school attendance rule with two caretakers in their household than with one. Thus, programs (workfare) designed to employ caretakers could reduce AFDC student attendance. This prediction was unexpected and so warrants further investigation.

Notes

[1]The student records for Sweetwater Union High School District (SUHSD) and Grossmont Union High School District (GUHSD) were commingled in the database. To remove the GUHSD records, the identification codes for SUHSD in April 1997, before GUHSD entered, were match merged with May and June 1997. New records for those months were deleted. Identification codes for SUHSD in January 1998, after GUHSD exited, were match merged with October, November and December 1997. Old records for those months were deleted. The result is a time series for SUHSD that has no new records for certain months, but which contains no contamination from GUHSD records.

[2]The missing data problem stems from slippage between the school districts and DSS when matching. A confound develops through the checking process on reconciling missing student information. Students in the treatment group may or may not respond to attendance checking, but their records are validated nonetheless. Monitoring caused the study groups to be different over time in terms of missing data. This might be interpreted as "divergent accretion." The monitoring changes "missing data" in the treatment group over time. Attendance checking only increases the valid data in the treatment group--it does not reduce valid data in the control group. Valid data increases by a small amount, such that random assignment to the study groups remains proportional at 2:1. However, checking does not affect remaining missing data, which is initially randomly distributed.

[3]Models including multiple race/ethnicity dummies are over-determined. Because African-American race and Hispanic origin are correlated, they were estimated separately.

References

Jones, Loring P., Ronald A. Harris, and Daniel J. Finnegan. 1999. Final Evaluation Report for the School Attendance Demonstration Project. San Diego, CA: San Diego State University Foundation.

Mohr, Lawrence B. 1992. Impact Analysis for Program Evaluation, 2nd Ed. Thousand Oaks, CA: Sage Publications.

Appendix

Table 1. Race and ethnicity

March 1998 (Matched 3-10-98)	Treatment Group		Control Group	
US Bureau of Census Category	Percent	Number	Percent	Number
White, not of Hispanic origin	10.3	186	10.9	106
Black, not of Hispanic origin	29.1	525	31.3	305
Hispanic	23.1	417	22.3	217
Asian and Pacific Islander	37.5	677	35.5	345
American Indian/Alaskan Native	.1	2	.0	0
Total	100.0	1807	100.0	973

Table 2. Deprivation codes

March 1998 (Matched 3-10-98)	Treatment Group		Control Group	
Deprivation Codes	Percent	Number	Percent	Number
Absence of parent	58.1	1050	59.4	578
Death of parent	4.6	83	4.3	42
Incapacitated parent	.0	0	.1	1
Parent on Social Security--No AFDC	.0	0	.0	0
Unemployed parent	19.0	344	19.2	187
Missing	18.2	330	16.9	165
Total	100.0	1807	100.0	973

Table 3. Linear regression of study group on percent school attendance

Month/Year (Match Date)	Constant	Impact (B)	t-value	p-value
February 1996 (03-10-96)	89.757	.520	.536	.592
March 1996 (04-10-96)	84.282	.821	.863	.388
April 1996 (05-10-96)	83.189	1.710	1.870	.062
May 1996 (06-10-96)	83.424	2.657	2.863	.004**
September 1996 (10-10-96)	90.091	-.418	-.524	.600
October 1996 (11-10-96)	89.132	-.856	-1.11	.267
November 1996 (12-10-96)	87.696	-2.048	-2.324	.020*
December 1996 (01-10-97)	83.159	.245	.258	.796
January 1997 (02-10-97)	85.787	-.171	-.239	.811
February 1997 (03-10-97)	82.554	1.654	1.765	.078
March 1997 (04-10-97)	84.738	1.919	2.419	.016*
April 1997 (05-10-97)	n.a.	n.a.	n.a.	n.a.
May 1997 (06-10-97)	84.081	1.320	1.503	.133
September 1997 (10-10-97)	84.534	1.507	1.449	.147
October 1997 (11-10-97)	85.763	2.093	2.498	.013*
November 1997 (12-10-97)	n.a.	n.a.	n.a.	n.a.
December 1997 (01-10-98)	80.774	2.764	2.795	.005**
January 1998 (02-10-98)	83.990	1.858	2.135	.033*
February 1998 (03-10-98)	82.216	2.569	2.984	0.003**

*Significant at 0.05 level. **Significant at 0.01 level or less.

Table 4. Probability of meeting the 80% attendance rule by study group

Month/Year (Match Date)	Mean (~0.67)	Control (0)	Treatment (1)	Impact (d)
February 1996 (03-10-96)	.84	.83	.85	.02
March 1996 (04-10-96)	.80	.75	.83	.08**
April 1996 (05-10-96)	.78	.72	.81	.09**
May 1996 (06-10-96)	.81	.72	.85	.13**
September 1996 (10-10-96)	.89	.86	.90	.04**
October 1996 (11-10-96)	.85	.82	.86	.04**
November 1996 (12-10-96)	.82	.80	.83	.03
December 1996 (01-10-97)	.77	.74	.79	.05**
January 1997 (02-10-97)	.77	.72	.79	.07**
February 1997 (03-10-97)	.77	.72	.80	.08**
March 1997 (04-10-97)	.81	.76	.83	.07**
April 1997 (05-10-97)	n.a.	n.a.	n.a.	n.a.
May 1997 (06-10-97)	.80	.76	.82	.06**
September 1997 (10-10-97)	.87	.78	.89	.11**
October 1997 (11-10-97)	.86	.78	.89	.11**
November 1997 (12-10-97)	n.a.	n.a.	n.a.	n.a.
December 1997 (01-10-98)	.77	.68	.81	.04**
January 1998 (02-10-98)	.75	.73	.76	.03
February 1998 (03-10-98)	.74	.69	.75	.06**

*Significant at 0.05 level. **Significant at 0.01 level or less.

Table 5. Logistic regression of social variables on "attends okay (≥80%)"

September 1996 (Matched 10-10-96)

Variable	B	S.E.	Wald	df	Sig.	R	Exp(B)
Group	.3399	.1898	3.2063	1	.0734	.0329	1.4048
Gender	-.3367	.1901	3.1370	1	.0765	-.0320	.7142
Ethnicity	-.6453	.1953	10.9153	1	.0010	-.0895	.5245
Age	-.3097	.1510	4.2056	1	.0403	-.0445	.7337
Parents	.8384	.3165	7.0193	1	.0081	.0672	2.3127
Household	.0058	.0572	.0104	1	.9188	.0000	1.0059
Children's	-.5541	.3296	2.8265	1	.0927	-.0272	.5746
Probation	-.8740	.4229	4.2704	1	.0388	-.0452	.4173
Schools	-2.7045	.1894	203.9197	1	.0000	-.4259	.0669
Constant	8.1365	2.6098	9.7200	1	.0018		

N=1517

October 1996 (Matched 11-10-96)

Variable	B	S.E.	Wald	df	Sig.	R	Exp(B)
Group	.4875	.1656	8.6669	1	.0032	.0699	1.6282
Gender	-.2221	.1639	1.8372	1	.1753	.0000	.8008
Ethnicity	-.5872	.1707	11.8304	1	.0006	-.0848	.5559
Age	-.1177	.1257	.8766	1	.3491	.0000	.8890
Parents	.5939	.2668	4.9569	1	.0260	.0465	1.8111
Household	.0783	.0511	2.3528	1	.1251	.0161	1.0815
Children's	-.9121	.2847	10.2611	1	.0014	-.0778	.4017
Probation	-.5509	.3817	2.0827	1	.1490	-.0078	.5765
Schools	-2.3683	.1681	198.3825	1	.0000	-.3791	.0936
Constant	4.1352	2.1636	3.6529	1	.0560		

N=1654

November 1996 (Matched 12-10-96)

Variable	B	S.E.	Wald	df	Sig.	R	Exp(B)
Group	.3663	.1492	6.0281	1	.0141	.0494	1.4423
Gender	-.2994	.1476	4.1158	1	.0425	-.0358	.7413
Ethnicity	-.5701	.1544	13.6280	1	.0002	-.0840	.5655
Age	-.2246	.1083	4.3002	1	.0381	-.0374	.7988
Parents	.6018	.2300	6.8491	1	.0089	.0542	1.8255
Household	.0287	.0434	.4377	1	.5082	.0000	1.0291
Children's	-.8490	.2643	10.3154	1	.0013	-.0710	.4279
Probation	-1.0377	.3517	8.7048	1	.0032	-.0638	.3543
Schools	-2.3105	.1532	227.4679	1	.0000	-.3699	.0992
Constant	5.9767	1.8702	10.2134	1	.0014		

N=1760

Table 6. Logistic regression of social variables on "attends okay (≥80%)"

December 1996 (Matched 01-10-97)

Variable	B	S.E.	Wald	df	Sig.	R	Exp(B)
Group	.4418	.1379	10.2624	1	.0014	.0663	1.5556
Gender	-.5411	.1382	15.3251	1	.0001	-.0842	.5821
Ethnicity	-.5994	.1441	17.3109	1	.0000	-.0903	.5492
Age	-.1349	.0981	1.8928	1	.1689	.0000	.8738
Parents	.7366	.2080	12.5480	1	.0004	.0749	2.0889
Household	.0275	.0397	.4795	1	.4886	.0000	1.0279
Children's	-1.1544	.2569	20.1869	1	.0000	-.0984	.3152
Probation	-1.2625	.3403	13.7601	1	.0002	-.0791	.2830
Schools	-2.3207	.1547	225.0553	1	.0000	-.3446	.0982
Constant	4.1924	1.6959	6.1109	1	.0134		

N=1789

January 1997 (Matched 02-10-97)

Variable	B	S.E.	Wald	df	Sig.	R	Exp(B)
Group	.5268	.1309	16.2064	1	.0001	.0844	1.6935
Gender	-.3296	.1305	6.3832	1	.0115	-.0469	.7192
Ethnicity	-.6455	.1384	21.7497	1	.0000	-.0996	.5244
Age	-.0104	.0908	.0131	1	.9088	.0000	.9897
Parents	.5356	.1911	7.8580	1	.0051	.0542	1.7084
Household	.0531	.0389	1.8638	1	.1722	.0000	1.0546
Children's	-.9366	.2497	14.0639	1	.0002	-.0778	.3920
Probation	-1.0385	.3317	9.8041	1	.0017	-.0626	.3540
Schools	-2.4044	.1572	233.8407	1	.0000	-.3411	.0903
Constant	1.6828	1.5675	1.1525	1	.2830		

N=1825

February 1997 (Matched 03-10-97)

Variable	B	S.E.	Wald	df	Sig.	R	Exp(B)
Group	.6191	.1308	22.4022	1	.0000	.1023	1.8572
Gender	-.4000	.1312	9.2948	1	.0023	-.0612	.6703
Ethnicity	-.6537	.1383	22.3245	1	.0000	-.1021	.5201
Age	-.1310	.0903	2.1035	1	.1470	-.0073	.8772
Parents	.5836	.1894	9.4989	1	.0021	.0620	1.7925
Household	-.0146	.0384	.1452	1	.7032	.0000	.9855
Children's	-1.2028	.2510	22.9660	1	.0000	-.1037	.3003
Probation	-.8479	.3559	5.6762	1	.0172	-.0434	.4283
Schools	-2.1846	.1542	200.5951	1	.0000	-.3192	.1125
Constant	4.0112	1.5674	6.5489	1	.0105		

N=1833

Table 7. Logistic regression of social variables on "attends okay (≥80%)"

March 1997 (Matched 04-10-97)

Variable	B	S.E.	Wald	df	Sig.	R	Exp(B)
Group	.6423	.1377	21.7584	1	.0000	.1018	1.9008
Gender	-.3203	.1375	5.4275	1	.0198	-.0424	.7260
Ethnicity	-.8013	.1436	31.1412	1	.0000	-.1236	.4487
Age	-.1927	.0933	4.2696	1	.0388	-.0345	.8247
Parents	.7368	.2074	12.6222	1	.0004	.0746	2.0892
Household	-.0178	.0397	.2016	1	.6534	.0000	.9823
Children's	-1.6022	.2557	39.2550	1	.0000	-.1398	.2015
Probation	-1.4246	.3324	18.3671	1	.0000	-.0926	.2406
Schools	-2.3681	.1553	232.6643	1	.0000	-.3478	.0937
Constant	5.3556	1.6301	10.7937	1	.0010		

N=1931

May 1997 (Matched 06-10-97)

Variable	B	S.E.	Wald	df	Sig.	R	Exp(B)
Group	.5164	.1392	13.7541	1	.0002	.0808	1.6760
Gender	-.5330	.1401	14.4700	1	.0001	-.0832	.5868
Ethnicity	-.6025	.1474	16.7073	1	.0000	-.0904	.5474
Age	-.0527	.0951	.3068	1	.5797	.0000	.9487
Parents	.7349	.2027	13.1485	1	.0003	.0787	2.0853
Household	-.0436	.0402	1.1767	1	.2780	.0000	.9573
Children's	-1.2024	.2671	20.2674	1	.0000	-.1007	.3005
Probation	-1.2776	.3447	13.7393	1	.0002	-.0807	.2787
Schools	-2.4398	.1668	213.8628	1	.0000	-.3429	.0872
Constant	2.9692	1.6640	3.1842	1	.0744		

N=1731

September 1997 (Matched 10-10-97)

Variable	B	S.E.	Wald	df	Sig.	R	Exp(B)
Group	.8645	.1867	21.4482	1	.0000	.1289	2.3738
Gender	-.1218	.1868	.4252	1	.5144	.0000	.8853
Ethnicity	-.2840	.1997	2.0225	1	.1550	-.0044	.7528
Age	-.1455	.1575	.8532	1	.3556	.0000	.8646
Parents	.8474	.2937	8.3228	1	.0039	.0735	2.3336
Household	-.0271	.0530	.2615	1	.6091	.0000	.9732
Children's	-1.0427	.4092	6.4919	1	.0108	-.0619	.3525
Probation	-1.5372	.4524	11.5456	1	.0007	-.0903	.2150
Schools	-2.8818	.1943	219.9553	1	.0000	-.4315	.0560
Constant	4.8126	2.6967	3.1850	1	.0743		

N=1487

Table 8. Logistic regression of social variables on "attends okay (≥80%)"

October 1997 (Matched 11-10-97)

Variable	B	S.E.	Wald	df	Sig	R	Exp(B)
Group	1.0163	.1727	34.6370	1	.0000	.1585	2.7630
Gender	.0272	.1721	.0250	1	.8743	.0000	1.0276
Ethnicity	-.5639	.1835	9.4441	1	.0021	-.0757	.5690
Age	.0170	.1423	.0143	1	.9048	.0000	1.0172
Parents	.7294	.2537	8.2683	1	.0040	.0695	2.0739
Household	-.0572	.0483	1.4049	1	.2359	.0000	.9444
Children's	-1.4696	.3999	13.5059	1	.0002	-.0941	.2300
Probation	-1.0149	.4736	4.5921	1	.0321	-.0447	.3624
Schools	-3.0016	.2035	217.4585	1	.0000	-.4073	.0497
Constant	1.7935	2.4311	.5442	1	.4607		

N=1563

December 1997 (Matched 01-10-98)

Variable	B	S.E.	Wald	df	Sig	R	Exp(B)
Group	.8445	.1277	43.7253	1	.0000	.1451	2.3269
Gender	-.2741	.1270	4.6609	1	.0309	-.0366	.7603
Ethnicity	-.5339	.1370	15.1884	1	.0001	-.0816	.5863
Age	.0922	.0979	.8860	1	.3466	.0000	1.0966
Parents	1.0685	.1936	30.4744	1	.0000	.1198	2.9111
Household	.0097	.0341	.0805	1	.7767	.0000	1.0097
Children's	-1.0882	.3547	9.4113	1	.0022	-.0611	.3368
Probation	-1.0335	.3931	6.9114	1	.0086	-.0498	.3557
Schools	-2.4307	.1818	178.7063	1	.0000	-.2986	.0880
Constant	-.4907	1.6646	.0869	1	.7682		

N=1769

January 1998 (Matched 02-10-98)

Variable	B	S.E.	Wald	df	Sig	R	Exp(B)
Group	.5408	.1269	18.1564	1	.0000	.0937	1.7173
Gender	.0728	.1253	.3379	1	.5610	.0000	1.0756
Ethnicity	-.5030	.1369	13.5002	1	.0002	-.0791	.6047
Age	-.2512	.0948	7.0252	1	.0080	-.0523	.7779
Parents	1.1208	.1886	35.3319	1	.0000	.1346	3.0674
Household	-.0374	.0349	1.1430	1	.2850	.0000	.9633
Children's	-.7696	.3715	4.2919	1	.0383	-.0353	.4632
Probation	-.3029	.4308	.4944	1	.4820	.0000	.7387
Schools	-2.2195	.2361	88.3935	1	.0000	-.2167	.1087
Constant	5.4118	1.6356	10.9472	1	.0009		

N=1720

Table 9. Logistic regression of social variables on "attends okay (≥80%)"

February 1998 (Matched 03-10-98)

Variable	B	S.E.	Wald	df	Sig.	R	Exp(B)
Group	.2809	.1164	5.8206	1	.0158	.0406	1.3243
Gender	-.0747	.1125	.4411	1	.5066	.0000	.9280
Ethnicity	-.3416	.1243	7.5505	1	.0060	-.0490	.7106
Age	.1148	.0837	1.8816	1	.1702	.0000	1.1216
Parents	.7888	.1608	24.0610	1	.0000	.0976	2.2008
Household	-.0207	.0318	.4256	1	.5141	.0000	.9795
Children`s	-.8722	.3570	5.9709	1	.0145	-.0414	.4180
Probation	.0724	.4242	.0292	1	.8644	.0000	1.0751
Schools	-2.3221	.1631	202.6190	1	.0000	-.2944	.0981
Constant	-.7901	1.4393	.3013	1	.5831		

N=1945

Table 10. Logistic regression of social variables on high school graduation

February 1998 (Matched 03-10-98)

Variable	B	S.E.	Wald	df	Sig.	R	Exp(B)
Group	-.1072	.1611	.4431	1	.5056	.0000	.8983
Gender	.5818	.1536	14.3480	1	.0002	.0775	1.7892
Ethnicity	-.5183	.1880	7.5979	1	.0058	-.0522	.5955
Age	3.4774	.1766	387.8012	1	.0000	.4330	32.3748
Parents	.4590	.1968	5.4383	1	.0197	.0409	1.5824
Household	-.1439	.0448	10.3287	1	.0013	-.0636	.8660
Children's	-.2148	.4102	.2743	1	.6004	.0000	.8067
Probation	-.1247	.4739	.0692	1	.7925	.0000	.8828
Schools	-2.1128	.2980	50.2606	1	.0000	-.1532	.1209
Constant	-61.2489	3.0969	391.1545	1	.0000		

N=1945